

HYMENOPTERA.

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The Hymenoptera collected by Mr. R. Helms, of the Elder Exploring Expedition, having been handed to me to classify, I submit the following account of them. In several instances I have to pass over several interesting insects that are very likely new species, as I do not feel justified in describing them without a better knowledge of the literature of this much neglected group in Australia, than is accessible to me in Sydney; while as regards the ants I abstain from dealing with them, as my knowledge of the family is very superficial.

Considering that the collection is the result of nearly nine months gathering in the sandy ridges and ranges of Central Australia, I think it very meagre, and remarkable for containing none of the typical fossorial wasps of this part of the continent, while the Pompilidæ, Sphegidæ, Vespidæ, and larger Eumenidæ are very poorly represented, and the Formicidæ comprises only eight species from a country which simply swarms with ants in ordinary seasons.

However, in all expeditions, even under the best management, collectors have many difficulties to contend with, that often prevent them from making such extensive collections as they might wish.

This collection contains 57 specimens (including a number of small ants on a card as one). The following is a list of specimens in their natural order, with the locality as given on the collector's label:—

ICHNEUMONIDÆ.

CRYPTUS, *sp.*

This is one of our commonest species, and has a very wide range over the whole of Australia, about Sydney it is parasitic on the larvæ of several common moths that crawl upon the grass.

.Mount Squires; one example.

OPHION (three species).

Only one species of this genus has been described from Australia, and most likely these, apparently three distinct species are

new, but it is a very difficult group to work at without plenty of material, and one of the specimens has lost its abdomen.

Cootanoorina Creek ; one specimen of each species.

EVANIIDÆ.

GASTERUPTION, *sp.*

This appears to be the same species that we find in the vicinity of Sydney.

Mount Squires ; two specimens.

FORMICIDÆ.

The ants consist of eight different species, none of which are very remarkable ; chief among them is a metallic-green ant, of which there are thirteen specimens from Victoria Desert ; a large hairy ground-ant, a small *Myrmica*, a *Formica*, a number of small ants gummed on a card, and several others.

MUTILLIDÆ.

MUTILLA FORMICARIA, *Fabr.*

This is one of our largest *Mutilla*, and has a very wide range over Australia. It was one of the many insects obtained by Banks, and described in Fabricius' "Systematica Entomologica." This specimen looks as though it had been in spirits, as the white pubescence and hairs are apparently discoloured ; it is somewhat larger than those obtained in the vicinity of Sydney.

Victoria Desert, W.A. ; one female.

MUTILLA ELDERI, *sp. nov.*

Female. Length, 2 lines.

Black, legs ferruginous, ornamented with a patch of yellow hairs upon the abdomen.

Head very round, finely punctured, and covered with scattered black hairs ; thorax square in front, swelling outwards from the prothorax, narrow at metathorax, covered with large confluent punctures, and clothed with scattered white hairs at base ; legs ferruginous, and very hairy.

Abdomen, first segment narrow, finely punctured, clothed with scattered white hairs at base ; second segment large, oval, finely but deeply punctured, clothed on sides with scattered black hairs, the centre covered with a dense patch of golden hairs, which occupy the whole length of segment ; third, fourth, and fifth segments fringed with yellow hairs ; sixth segment shiny ferruginous, smooth, and shining.

Fraser Range, West Australia.

THYNNIDÆ.

THYNNUS TAENIOLATUS, *sp. nov.*

Male. Length, 6 lines.

Head black, round, covered with white hairs on face, finely rugose on forehead; thorax and legs black, a pale white band along the outer margin of mesothorax, which is finely punctured, with an impressed line on either side, a white mark on either side of the mesothorax from the base of hindwing to the bottom of scutellum; scutellum broad at base, twice the width of apex, which is margined with a white mark. Wings slightly fuscous. Abdomen black, first segment marked with pale yellow fascia almost divided in two by small black line; second, third, fourth, and fifth segments marked with broad yellow fasciæ, which are roundish, and interrupted in centre with small black line, the outer edge of these segments margined with whitish yellow. Underside of first segment with small wedge-shaped spot, of third, fourth, and fifth marked with club-shaped patch, the apex of each margined the lower edges of the segment with dull white.

One specimen in damaged condition, having lost its antennae.

RHAGIGASTER INTEGER, *Fabr.*

This is a common species, having a very wide distribution over the greater part of Southern Australia.

Victoria Desert.

LARRIDÆ.

PISON, *sp.*

Mount Squires.

POMPILIDÆ.

FERREOLA, *sp.*

Fraser Range.

EUMENIDÆ.

ODYNERUS, *spp.*

Three species of this genus are represented, though it is quite possible that one is only a variety. Many of our Australian *Odynerus* are described in Saussure's "Supplement to his Monograph of the Vespidae," a work that is not obtainable in any of our Australian libraries.

Mount Squires.

ANDRENIDÆ

HALTICUS, *sp.*

Mount Squires; one specimen, a small burrowing bee, probably a new species.

GENUS AND SP. UNCERT.

Victoria Desert ; one specimen, a very curious little banded bee with a broad abdomen.

GENUS AND SP. UNCERT.

Mount Squires ; seven specimens of burrowing bee.

APIDÆ.

ANTHOPORA CINGULATA, *Fab.*

Described under the name *Andrena cingulata* in his Systematica Entomologica, vol. II., p. 314.

This pretty little banded bee has a very wide range over the southern parts of Australia, and is not uncommon about Sydney.

Three specimens ; Nilpena, Central Australia.

SARAPODA BOMBILIFORMIS, *Smith.*

This fine bee is common about Sydney in the summer, often flying into the house.

One specimen ; Mount Squires.

CROCISA ALBO-MACULATA, *Smith.*

Also recorded from the northern parts of New South Wales and Queensland.

Mount Squires ; two specimens.

MEGACHILE BLACKBURNII, *sp. nov.*

Female. Length 8 lines, black, clothed with white hairs.

Tongue and mouth parts ferruginous ; head very closely and finely punctured ; face densely clothed with silvery white hairs, which form a thick brush, drooping down over the mandibles ; cheeks behind the eyes and underside of head closely covered with silvery white hairs ; thorax very finely but closely punctured covered with a close pile of white hairs on the underside and at apex above.

Fore legs ferruginous on the upper side of tibiæ, under portion dark-brown, tarsi produced into bright yellow pollen brush, claw ferruginous, covered with white hairs ; middle legs ferruginous on upper side of tibiæ and tarsi, dark-brown on underside, clothed with white hairs ; tarsi ferruginous, and fringed with white hairs much longer at base of tarsi.

Abdomen constricted at base of each segment with narrow smooth impressed band, which is more finely punctured than upper portion of segment ; first segment densely clothed in long white hairs ; second segment with scattered white hairs and a bright white patch of close short silvery hairs on either side ;

third segment similarly ornamented with smaller white patches, the following segments shining, lightly fringed on lower margins with white hairs ; underside of abdomen clothed with long white hairs forming a tuft standing out on either side of the last segment.

Wings hyaline, upper portion of marginal cell and outer edges of forewings faintly fuscous, nervures black.

Three specimens.

Male ; 5 lines. Black, finely punctured and covered with white hairs, differing from female in having all the legs black and closely covered with white hairs, the upper sides of first and second segments of abdomen clothed with long white hairs, and the remaining segments with scattered white hairs.

Mount Squires ; one specimen.

